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SUPPLEMENT TO
REPORT NO. 50X1-HUM

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b. The Dravograd-Fala Network

The principal function of this network was to supply power to the Maribor industrial basin. During the war,

- 1) The Velenje thermo-electric power station was linked to this network, and catered to local industries in Celje, Gustanj and Store.
- 2) The Dravograd hydro-electric power station was enlarged by the Germans, and output increased.
- 3) A new hydro-electric power station at Maribor Otok (Island) was nearly completed, and then later, almost completely destroyed by the Germans when they withdrew from the country in April and May 1945.

c. The Kranj-Zirovnica-Jesenice Network

The Kranj and Zirovnica hydro-electric power stations, together with a small thermo-electric power station at Jesenice, supplied power to the industrial centers of Jesenice, Kranj, Trzin and Kamnik.

4. The "Western Electrification Plan" provided for the construction and/or reconstruction of the following power stations:

a. Maribor Otok

Reconstruction of the power station. In 1948 the station was completed and began functioning. Generating equipment is limited for the present to one turbine developing 18,000 Kw.

b. Trbonje/Vuzenica-on-Drava

New station with designed output of 35,000 Kw. A dam across the Drava is now almost completed. Generating equipment not yet installed.

c. Velenje (Lower Styria/Slovenia)

Output of this station to be increased over the next ten years from 10,000 Kw to 200,000 Kw through increased exploitation of local lignite deposits.

d. Zirovnica (20 kilometers east of Jesenice)

A new hydro-electric power station is being built alongside the existing one, and both will exploit the waters of the Sava Dolinka, the mountain waters of the Vindgar, and a reservoir located near Zirovnica at the foot of Mount Stol. A new and bigger dam to take the place of the old one in the Sava Dolinka is also under construction.

e. Medvode (on Sava about 20 kilometers north of Ljubljana)

The new power station was completed in 1947. A new 30 meter high dam is under construction, and will take the place of the old dam which was destroyed during the war. This dam should be nearly completed now. It will form a 10 square kilometer reservoir.

f. Kranjska Gora (about 25 kilometers west of Jesenice)

Reconstruction of a small hydro-electric power station built by the Germans during the war in order to furnish power for a cable railway linking Kranjska Gora with the Isonzo Valley via the Vrsic Pass.

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g. Ozalj II (Croatia, about 20 kilometers north of Karlovac).

A new hydro-electric power station has been built near the site of the old one which, by virtue of a new intake canal, is better able to exploit the waters of the Kulpa River. No new dam is being built. Although the power house is already completed the Rade Koncar firm is unable to provide the generating equipment. Over the last fifteen months, Rade Koncar has continuously postponed delivery and [redacted] the last delivery date - June 1949 - has been postponed until the end of 1950.

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h. Mreznica Group

A chain of 12 small hydro-electric power stations to be built on river Mreznica, a tributary of the Kulpa. Work was begun on one dam, and then suspended, ostensibly for reasons of economy.

i. Tribalj (near Crikvenica, about 35 kilometers south of Fiume)

This new power station will be built into the rocky cliffs on the sea's edge. Excavation to a depth of 200 meters has already been completed. The power station will be fed by three artificial reservoirs located at Lokve, Mrzla Vodica and Sv. Kriz in Gorski Kotar. The reservoirs will be linked to the station via concrete pipes and a five kilometer tunnel to Licko Polja and, from there, by concrete pipes and a two kilometer tunnel direct to Tribalj. The total fall of water is 800 meters. The designed output of the station is 80,000 Kw. The Lokve reservoir has been cement lined and filled - the other two reservoirs and the five kilometer tunnel remain to be built. The two kilometer tunnel has already been completed.

j. Cetina

Plans are being prepared for the construction of what will become Yugoslavia's largest hydro-electric power station at Solin near Split. This station will exploit the falls of the river Cetina, and will be linked to the river via a tunnel passing through Sinj. Detailed plans have not yet been worked out, and the exact location of the power station has not been decided.

k. Mlinovi near Dubrovnik

Construction of a small hydro-electric power station about ten kilometers south of Dubrovnik. The station was completed in 1948 and has a capacity of 4,500 Kw.

5. The "Western Electrification Plan" provided for three main grid systems in Slovenia:

The Slovene-Croatian Grid
 The Northwestern Slovene Grid
 The Northeastern Slovene Grid

6. The Slovene-Croatian Grid

The Drava hydro-electric power stations and Velenje thermo-electric power station are already linked by 110,000 volt primary transmission lines to Slovenia's main transformer station at Lasko (about twelve kilometers south of Celje). Work is now in progress on linking the Lasko transformer station with Croatia's main transformer station at Podsused (about ten kilometers west of Zagreb), and primary transmission lines have already been constructed from Lasko as far as Kozje (about twelve kilometers north of Rajhenburg). These lines carry seven cables - one of which is a lighting conductor - and are supported on steel pylons.*

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7. The Northwestern Slovene Grid

This is the second most important in Slovenia. This low tension grid is fed by the following power stations: Kranj, Medvode, Tacen Hydro, Zirovnica Hydro, Kranjska Gora Hydro, Jesenice Hydro and Jesenice Thermo. The object of this grid is to cover Jesenice's requirements of 150,000 Kw hours daily as well as supply power to the Litostrojski factory near Ljubljana and the textile factories at Trzic and Kranj. Since the power stations in this grid are unable to meet current industrial demands, work began in 1948 on the construction of primary transmission lines linking this grid to the two power stations on the river Isonzo. These new lines were scheduled to be completed in April 1949 - it is not known whether they have actually been completed.

8. The Five-Year Plan provides for the electrification of the Ljubljana - Rakek - Postumia railway line. Power for this project is to be supplied by the Isonzo stations. Execution of this project will not be possible so long as the two Isonzo power stations sell power [redacted] nor will it be possible if - assuming power is no longer sold [redacted]

[redacted] - these stations are expected to feed and boost the overloaded Northwestern Slovene grid system. There are no indications now that work on this project will be undertaken. 50X1-HUM

9. The Northeastern Slovene Grid

The third most important grid system in Slovenia links the Drava hydro-electric power stations with the Maribor industrial basin and the Strnisce Aluminum Factory.

10. So far as Croatia was concerned, the "Western Electrification Plan" provided for:
- a. The linking up of the Podsused primary transformer station with the Lasko (Slovenia) primary transformer station. In this way, North Croatia and the city of Zagreb will be, it is hoped, provided with a steady source of power capable of meeting the increased demands of an expanding industry. The importance of this link may be readily appreciated when it is borne in mind that there is not a single power station of any importance between Zagreb and Novi Sad.
 - b. The construction of primary transmission lines between the Tribalj hydro-electric power station and Karlovac via Skrad. At Karlovac these lines will link up with the existing Karlovac-Ozalj-Zagreb-Podsused lines. Construction of the new 110,000 volt high tension lines between Tribalj and Karlovac is scheduled to begin shortly. Great importance is placed on the Tribalj power station because it is destined to provide power for the projected electrification of the Fiume-Delnice-Vrbovsko railway line - now considered one of the most important railway links in Yugoslavia, linking, as it does, Fiume with Zagreb and Central Europe. The small power station on the river Rijecina near Susak is only of local importance and quite incapable of meeting the demands of any large scale electrification scheme.
11. The following are some of the more important difficulties facing implementation of the "Western Electrification Plan":
- a. Rade Koncar, Litostrojski and Zeljeznik are quite unable to supply, within the given time limit, all the turbine and generating equipment demanded by the Plan. Consequently Yugoslavia is obliged to import this equipment from abroad. Foreign firms, on the other hand, either cannot or do not want to supply Yugoslavia with complete equipment for generating plants, with the result that Yugoslav engineers are forced to assemble a new plant out of a miscellaneous assortment of important spare parts, second hand parts, and reconditioned parts.

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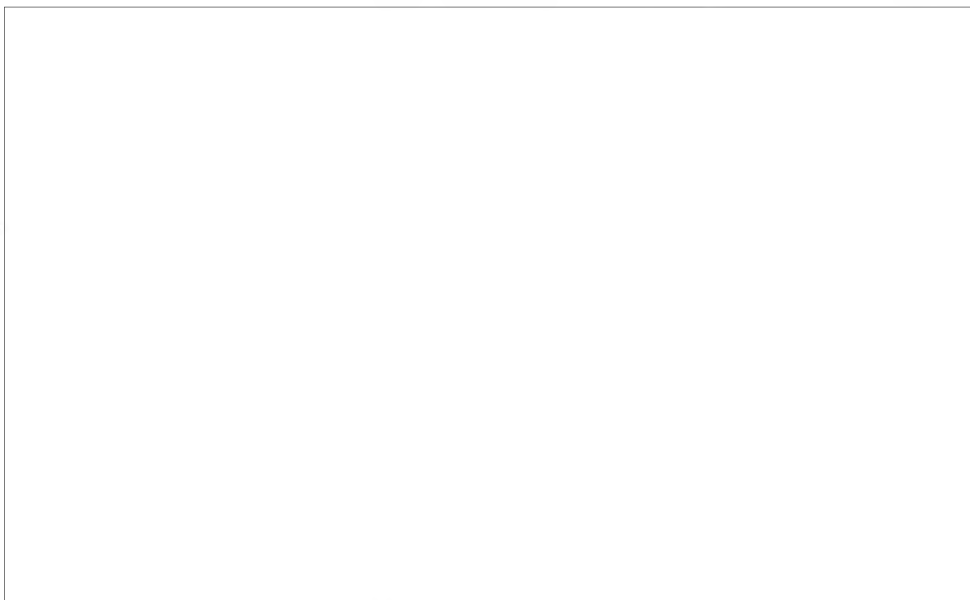
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- b. The cable factories at Novi Sad and Zagreb (Elka) are unable to meet demands since imports from the satellites have stopped.
- c. High tension insulators and insulating material is also in short supply.
- d. Production of steel pylons is slow and concentrated in the Maribor/Tezno works. Ferro-concrete pylons for low tension lines are manufactured by "Jugobeton" in Zagreb, and by a small unidentified firm in Ljubljana.
- e. Poor snow and rainfall have had their effect on power production this year. As a result of the low level of the river Drava, orders were issued in February that factories possessing their own generating plant should reactivate them. Independently produced power is, of course, much more expensive than that supplied by the grid. For example: the hemp and linen factory at Orosravije is now producing its own power at a cost of 32 dinars per Kw hour as compared with two dinars per Kw hour from the grid.

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- g. The Drava power stations are over-loaded. This is exemplified by the fact that the Fala reservoir dam has had to be raised by 30 cms. Heightening of the dam will help to reduce critical periods, though, on the other hand, it is realized that it may seriously damage turbine and generating equipment.
 - h. Overloading of the Zagreb thermo-electric power station. This station has been running continuously for two years without a stop and without an overhaul. Experts are apprehensive that the station may break down any moment and jeopardize the power resources of the Zagreb industrial area.
12. Yugoslavia has recently received, probably on reparations account, a complete generating plant for a 100,000 Kw thermo-electric power station. This plant has been given to the Republic of Croatia. A recent meeting of experts decided to install this plant in a power house to be located in the Konjscina brown coal basin. This station is calculated to provide cheap power to north Croatian industries, particularly the timber centers in Nasice, Orahovica and Ivanicgrad.

Comment: These are the first 110,000 high tension lines under construction in Yugoslavia.

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